CLAIMS

1. A heat exchanging tube provided with a flat tube main body having a predetermined length and a plurality of refrigerant passages extending in a tube longitudinal direction and arranged in a tube widthwise direction, wherein the following relational equations (a) to (c) are satisfied:

$W = 6$ to 18 mm ...(a),

$Ac/At \times 100 = 50$ to 70 % ...(b) and

$P/L \times 100 = 350$ to 450 % ...(c),

where "W" is a width of the tube main body, "Ac" is a total cross-sectional area of the refrigerant passages, "At" is a total cross-sectional area of the tube main body (including the refrigerant passages), "L" is an external perimeter of the tube main body and "P" is a total inner perimeter of the refrigerant passages.

2. The heat exchanging tube as recited in claim 1, wherein the following relational equation (d) is satisfied:

$P/W \times 100 = 750$ to 850 % ....(d).

3. The heat exchanging tube as recited in claim 1, wherein the following relational equation (e) is satisfied:

$N/W = 3$ to 4 ...(e),

where "N" is the number of refrigerant passages.

4. The heat exchanging tube as recited in claim 1, wherein the following relational equation is satisfied:

$$H = 0.5 \text{ to } 1.5 \text{ mm} \quad \ldots(f),$$

where "H" is a height of the tube main body.

5. The heat exchanging tube as recited in claim 1, wherein the following relational equation (g) is satisfied:

$$Ta = 50 \text{ to } 80\ \mu m \quad \ldots.(g),$$

where "Ta" is a thickness of the partitioning wall partitioning adjacent refrigerant passages in the tube main body.

6. The heat exchanging tube as recited in claim 1, wherein the following relational equation (h):

$$Tb = 80 \text{ to } 250\ \mu m \quad \ldots(h),$$

where "Tb" is the thickness of the external peripheral wall in the tube main body.

7. The heat exchanging tube as recited in claim 1, wherein the refrigerant passage is approximately rectangular in cross-section.

8. The heat exchanging tube as recited in claim 1, wherein the width W of the tube main body is set to be 6 to 14 mm.

9. The heat exchanging tube as recited in claim 1, wherein

the width W of the tube main body is set to be 7 to 12 mm.

10. The heat exchanging tube as recited in claim 1, wherein the following relational equation is satisfied:

$Ac/At \times 100 = 55$ to 65%.

11. The heat exchanging tube as recited in claim 1, wherein the following relational equation is satisfied:

$P/L \times 100 = 360$ to 420%.

12. A heat exchanging tube provided with a plurality of refrigerant passages in a flat tube main body having a predetermined length, the refrigerant passage extending in a direction of a tube longitudinal direction and being arranged in parallel in a tube widthwise direction,

wherein the following relational equations (a), (f), (g) and (h) are satisfied:

$W = 6$ to 18 mm ...(a),

$H = 0.5$ to 1.5 mm ...(f),

$Ta = 50$ to 80 μm ...(g) and

$Tb = 80$ to 250 μm ...(h),

where "W" is a width of the tube main body, "H" is a height of the tube main body, "Ta" is a thickness of a partitioning wall partitioning adjacent refrigerant passages in the tube main body, "Tb" is a thickness of an external peripheral wall of the tube main

body.

13. The heat exchanging tube as recited in claim 12, wherein the width W of the tube main body is set to be 6 to 14 mm.

14. The heat exchanging tube as recited in claim 12, wherein the width W of the tube main body is set to be 7 to 12 mm.

15. A heat exchanger provided with a pair of headers and a plurality of heat exchanging tubes arranged in parallel in a header length direction, opposite ends of the heat exchanging tube being connected to the headers in fluid communication,

wherein the heat exchanging tube is provided with a flat tube main body having a predetermined length and a plurality of refrigerant passages extending in a tube longitudinal direction and arranged in a tube widthwise direction, and

wherein the following relational equations(a) to (c) are satisfied:

$W = 6$ to 18 mm ...(a),

$Ac/At \times 100 = 50$ to 70 % ...(b) and

$P/L \times 100 = 350$ to 450 % ...(c),

where "W" is a width of the tube main body, "Ac" is a total cross-sectional area of the refrigerant passages, "At" is a total cross-sectional area of the tube main body (including the refrigerant passages), "L" is an external perimeter of the tube

main body and "P" is a total inner perimeter of the refrigerant passages.

16. The heat exchanger as recited in claim 15, wherein the width W of the tube main body is set to be 6 to 14 mm.

17. The heat exchanger as recited in claim 15, wherein the width W of the tube main body is set to be 7 to 12 mm.

18. The heat exchanger as recited in claim 15, wherein the following relational equation is satisfied:

$Ac/At \times 100 = 55$ to 65%.

19. The heat exchanger as recited in claim 15, wherein the following relational equation is satisfied:

$P/L \times 100 = 360$ to 420%.

20. A heat exchanger provided with a pair of headers and a plurality of heat exchanging tubes arranged in parallel in a header length direction, opposite ends of the heat exchanging tube being connected to the headers in fluid communication,

wherein the heat exchanging tube is provided with a flat tube main body having a predetermined length and a plurality of refrigerant passages extending in a tube longitudinal direction and arranged in a tube widthwise direction, and

wherein the following relational equations (a), (f), (g) and (h) are satisfied:

$W = 6$ to 18 mm ...(a),

$H = 0.5$ to 1.5 mm ...(f),

$Ta = 50$ to 80 μm ...(g) and

$Tb = 80$ to 250 μm ...(h),

where "W" is a width of the tube main body, "H" is a height of the tube main body, "Ta" is a thickness of a partitioning wall partitioning adjacent refrigerant passages in the tube main body, "Tb" is a thickness of an external peripheral wall of the tube main body.

21. The heat exchanger as recited in claim 20, wherein the width W of the tube main body is set to be 6 to 14 mm.

22. The heat exchanger as recited in claim 20, wherein the width W of the tube main body is set to be 7 to 12 mm.